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LESSONS LEARNED IN GROUT CLEANING OF UNDERGROUND SEWERS USING TRENCHLESS TECHNOLOGIES

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ABSTRACT: The City of Edmonton is located in the north-central part of the Province of Alberta, Canada. The City is serviced by about 4,600 km of sewerage and drainage facilities with sewers constructed as early as 1903. Many unique situations will require innovative solutions during the maintenance of the sewerage and drainage facilities. This paper contains the lessons learned when cleaning a grout filled sewer in the City.

The work scope includes cleaning of a blocked 525mm storm line within the storm drainage system. The storm sewer is located in a common trench with the neighbouring 200mm sanitary sewer. The storm sewer was found to be blocked with grout for about 44m of the 85m long pipe. Part of the storm sewer is located inside a pipeline right-of-way and thus making open cut option difficult. In addition, part of the utility right-of-way is located inside a private residence. Five samples of the grout have been obtained in order to better understand the situation. Compressive strength tests were performed and the results indicated relatively high compressive strength in the area of 15 MPa.

Several trenchless methods have been proposed and tried to clean the grout from the sewer including: grinding, coring and high pressure jet cleaning. A combination of these methods was used to successfully clean the grout from the sewer. The importance of choosing the proper method for cleaning the grout is learned. The selection of cleaning method has to consider the issues of site constraints and access as well.